

Single Phase Bridge Rectifier, 2 A



D-44

FEATURES

- Suitable for printed circuit board mounting
- Compact construction
- High surge current capability
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

DESCRIPTION

A 2 A single phase encapsulated bridge rectifier consisting of four single diodes connected as a full bridge. They are intended for general applications in industrial and consumer equipment.

PRIMARY CHARACTERISTICS

I_o	2 A
V_{RRM}	50 V to 1000 V
Package	D-44
Circuit configuration	Single phase bridge

MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	VALUES	UNITS
I_o		2.0	A
I_{FSM}	50 Hz	60	A
	60 Hz	63	
I^2t	50 Hz	18	A ² s
	60 Hz	16	
V_{RRM}		50 to 1000	V
T_J		-40 to +150	°C

ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS

PART NUMBER	V_{RRM} , MAXIMUM REPETITIVE PEAK REVERSE VOLTAGE (V)	V_{RSM} , MAXIMUM NON-REPETITIVE PEAK REVERSE VOLTAGE (V)	V_{RMS} , MAXIMUM RECOMMENDED RMS SUPPLY VOLTAGE (V)
VS-2KBP005	50	50	20
VS-2KBP01	100	100	50
VS-2KBP02	200	200	80
VS-2KBP04	400	400	125
VS-2KBP06	600	600	250
VS-2KBP08	800	800	380
VS-2KBP10	1000	1000	500



FORWARD CONDUCTION						
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS	
Maximum DC output current	I_o	$T_A = 50\text{ }^\circ\text{C}$, resistive or inductive load		2.0	A	
		$T_A = 50\text{ }^\circ\text{C}$, capacitive load		1.6		
Maximum peak one cycle, non-repetitive surge current	I_{FSM}	$t = 10\text{ ms}$, 20 ms	Following any rated load condition and with rated V_{RRM} reapplied	60	A	
		$t = 8.3\text{ ms}$, 16.7 ms		63		
Maximum I^2t capability for fusing	I^2t	$t = 10\text{ ms}$	100 % V_{RRM} reapplied	Initial $T_J = T_J$ maximum	A ² s	
		$t = 8.3\text{ ms}$				18
		$t = 10\text{ ms}$	No voltage reapplied			16
		$t = 8.3\text{ ms}$				23
Maximum $I^2\sqrt{t}$ capability for fusing	$I^2\sqrt{t}$	$t = 0.1$ to 10 ms, no voltage reapplied		255	A ² \sqrt{s}	
Maximum peak forward voltage per diode	V_{FM}	$I_{FM} = 1\text{ A}$, $T_J = 25\text{ }^\circ\text{C}$		1.0	V	
Typical peak reverse leakage current per diode	I_{RM}	$T_J = 25\text{ }^\circ\text{C}$, 100 % V_{RRM}		10	μA	
		$T_J = 150\text{ }^\circ\text{C}$, 100 % V_{RRM}		1.0	mA	
Operating frequency range	f			40 to 1000	Hz	

THERMAL AND MECHANICAL SPECIFICATIONS			
PARAMETER	SYMBOL	VALUES	UNITS
Operating junction and storage temperature range	T_J, T_{Stg}	-40 to 150	$^\circ\text{C}$
Approximate weight		4	g
		0.14	oz.

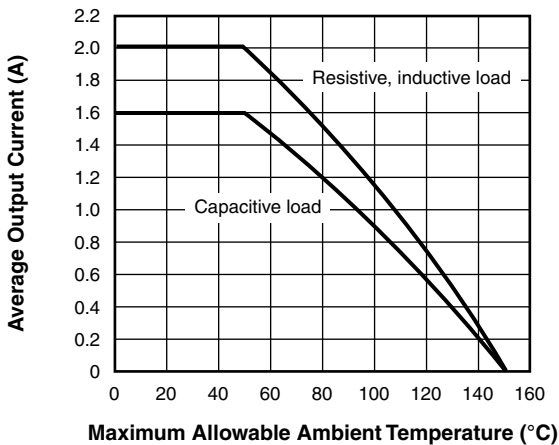


Fig. 1 - Ambient Temperature Ratings

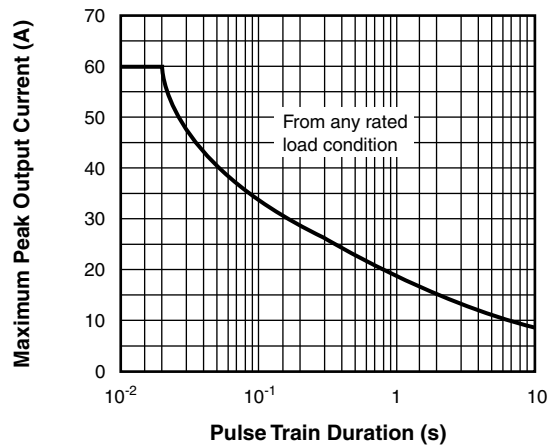
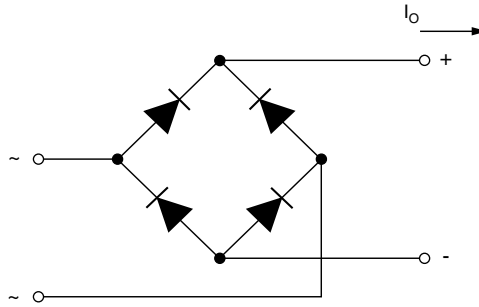


Fig. 2 - Non-Repetitive Surge Ratings



CIRCUIT CONFIGURATION



LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95329

D-44

DIMENSIONS in millimeters (inches)





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